Cloud Crypto Land

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Overview

Blockchain technology / DLTs – a functional view from a legal perspective

A simple legal argument against the feasibility of meaningful cryptoassets (except for “pure”/”naked” cryptocurrencies)

- Blockchain and the law as synchronisation problem
- Legal obstacles for putting assets on a blockchain & tokenizing the world

Why smart contracts & smart securities have little to offer

Implications for cryptoassets, smart contracts – and beyond?

A functional view of blockchains

At their core, blockchains solve the problem of chronologically ordering events in a way that all participants can agree with

Inability to “clone” physical objects is useful!

- Physical vs non-physical (“intangible”) world
- Merchants realised this a long time ago…
- Negotiable instruments exploit features of the physical world – as does cash

Non-native or “tethered” cryptoassets

Distinguish “naked” blockchains and crypto-tokens as representations of legally rights – “cryptoassets”

Pure cryptocurrencies are “naked” in this sense

- Like merchants deciding to care about the actual pieces of paper, rather than anything they may represent
- But there are other examples – theoretically, decentralised storage
- [and CryptoKitties]

All other tokens stand in for *something* – they are meant to convey rights of some sort

- E.g. “stablecoins”, “security tokens”, putting assets on the blockchains, etc

➢ This type of cryptoasset must be tethered to legal reality to fulfil its purpose

Blockchains and the Law as a Synchronisation Problem

A simple argument against the feasibility of cryptoassets and smart contracts in truly decentralised systems:

1. To the extent that cryptoassets represent legal rights, their enforcement depends at least in part on the legal system
2. The law places limits on what can be agreed, even between sophisticated parties
   - Capacity, fraud, duress, *ordre public*, …
3. Legal rules cannot fully be encoded in any formal algorithmic system, so this cannot be solved by and in code

→ If you want to put anything that is tethered to legal reality on the blockchain, you need a system of legal realignment:

Any cryptoasset blockchain system must include a process that allows it to sync its state with the law

Cryptoassets: Current Legal Obstacles

Possible approaches to synchronisation

a) ~~Give the state "write permission"! A super key valid for all transfers~~
   - "The state" (i.e. judges) can rectify the blockchain where appropriate

b) ~~Choice of law / contract?~~

c) ~~Oracles? "garbage in – garbage out"; equivalent to a)~~

d) ~~Adjudication on the blockchain or governance solutions?~~

What About Smart Contracts & Smart Securities

So, can this be “coded away”? Certainly not unless we have general AI, in which case

Can you code away 99%? YES, and we have been doing this for decades

Smart contracts are neither smart nor contracts

- also cannot be meaningfully self-executing, see e.g. “smart contract” bond
- Oracle problems etc

There is no link between algorithmic agreements and interactive “smart” ledgers and blockchain – tamper-resistance can be achieved without blockchains

- Why don’t we do this? Well, because nobody cares!

Complexity, precision, and usefulness

Algorithms/computer code vs natural legal language

- “Legalese” arguably occupies a sweet spot between formal and informal language

Rather shockingly, lawyers do **not** spend most of their time suing people for breach of crystal-clear obligations

A Legal Fix?

Prediction – no legal fix will be forthcoming

- "code is law" endorsement would have to be (very nearly) absolute and is a non-started
- See recent examples of "blockchain-friendly" laws

Potential benefits of smart contracts

- *If you can reliably code **all of it**, it probably doesn't matter much in the real world*

What about enterprise blockchains & permissioned systems?

- *These work of course!* ***But …***

The Illusion of Efficiency

Blockchain adoption and the junior business consultant fallacy

- Standard recipe:
  1. Harmonise all relevant systems, horizontally and vertically
  2. Use blockchain
- Cost of change and the right comparator
- Change is hard – starting from scratch is easy (and lazy)
- *The current state of the world is **not** a result of people failing to understand the obvious*

As always, realising the potential requires coordinated change

- Containers

But: blockchain technology may still drive useful change

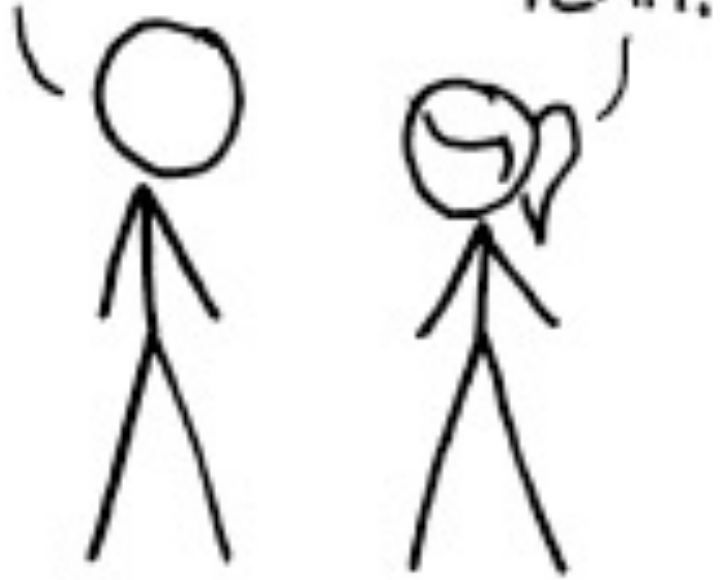
- What if people believed that switching to the metric system solved world hunger

HOW STANDARDS PROLIFERATE:

(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC.)

SITUATION: THERE ARE 14 COMPETING STANDARDS.

14?! RIDICULOUS! WE NEED TO DEVELOP ONE UNIVERSAL STANDARD THAT COVERS EVERYONE'S USE CASES.



SOON:

SITUATION: THERE ARE 15 COMPETING STANDARDS.

Conclusion

Permissionless blockchains are incompatible with the legal systems of (virtually) all countries

Decentralisation is absence of hierarchy; rule of law, as any rule, requires hierarchy

Recentralisation (including “enterprise blockchains”) renders technology pointless

Smart contracts can only reflect rights and obligations that do not in reality create significant friction

Prediction: law will not adapt to the extent necessary (nor should it in my view)

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